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# Curs 6. Adresare IPv4

192.168.1.173

0..255

→ NU există adrese { 0.x.y.z (pt că 0.0.0.0 e IN_ADDRANY)
127.x.y.z (pt că 127.x.y.z e local host)
peste 223.255.255.255

și dacă 0000 e IN-ADDRANY?

→ 255.255.255.255 → IP universal de broadcast

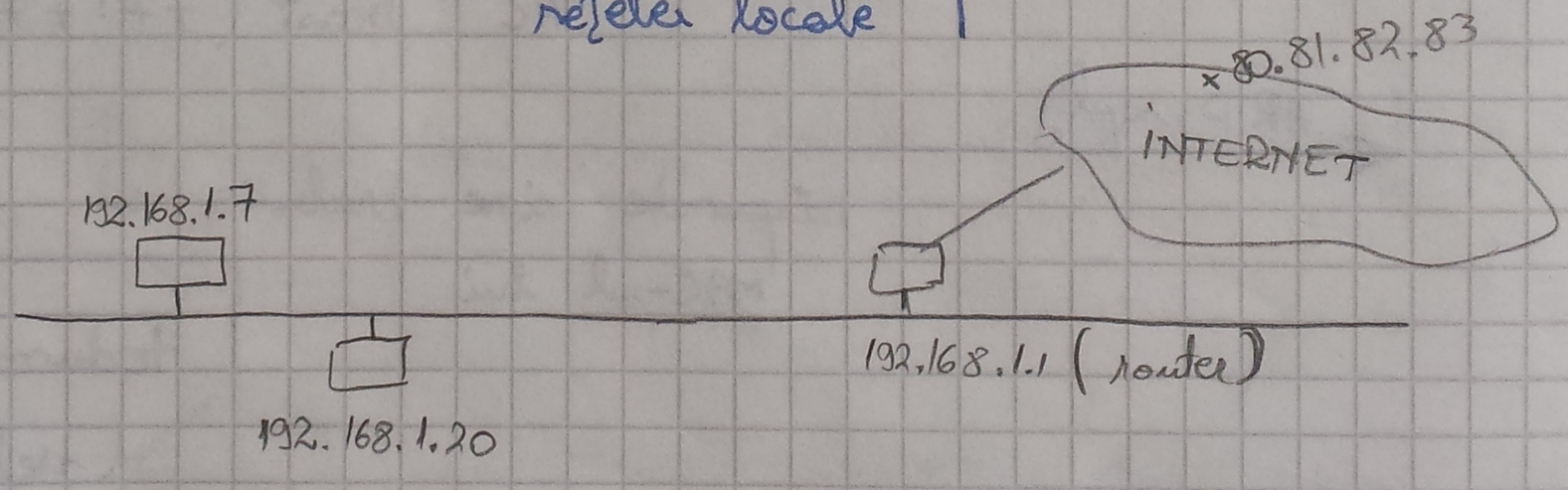
192.168.1.x < 0 / 255 } 256 adrese IP

Netmask → 255.255.255.0

192.168.1.0 → adresă de rețea
255.255.255.0 (netmask-ul) = /24
} clasă de rețea IP

192.168.1.255 → IP de broadcast a rețelei locale

Netmask (mască de rețea)




Default gateway = echipamentul cu adresă IP la care trebuie trimise datele pt ca acestea să părăsească rețeaua locală

Dream I) 192.168.1.7 → 192.168.1.20 (NU am nevoie de internet, gateway...)

II) 192.168.1.7 → 80.81.82.83

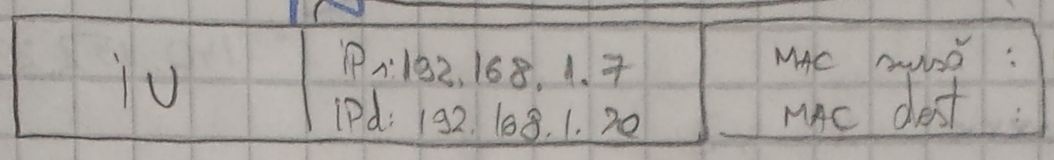
I a) 192.168.1.7 ①
255.255.255.0
adresa de rețea
192.168.1.0

=

192.168.1.20 ①
255.255.255.0
192.168.1.0

b) ARP request trimis de sursă (află MAC-ul destinației)
ARP reply de la dest.

c)



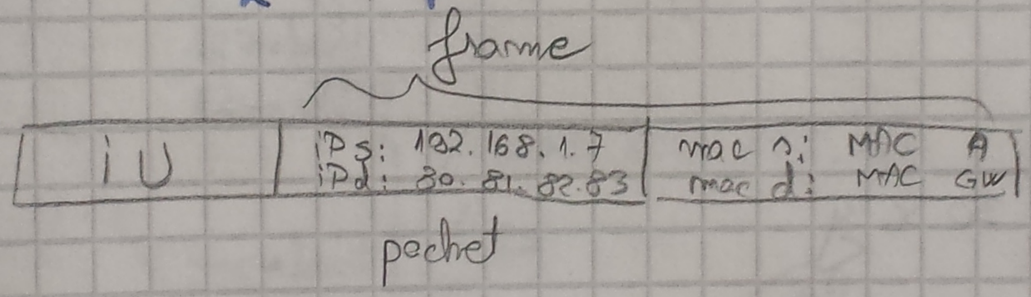

II a) 192.168.1.7 ①
255.255.255.0
192.168.1.0

≠

80.81.82.83 ①
255.255.255.0
80.81.82.0

b) ARP request pt adresa MAC a default gateway

c)




192.168.0.X ①
0.0.0.255 (net mask)

192.168.1.255 ← adresa de bcast a rețelei
(ultima adresă IP din clasă)

A,B,C

A: 0xxx xxxx . x.y.z /8

0.x.y.z
↓
127.x.y.z
} adrese IP de clasa A

30.x.y.z
$2^{24}$ adrese

30.0.0.0 ← adr rețea
30.255.255.255 ← bcast

B: 10xx xxxx . x . y . z /16

128. x . y . z

⋮

191. x . y . z

↳ 64 · 256

Ex: 140.152. x . y

140.152.0.0 ← adr. rețea

140.152.255.255 ← adr. bcast

C: 110 x xxxx . x . y . z

192. x . y . z

⋮

223 . x . y . z

↳ 32 · 256 · 256 done

In campus:

B: 172. 30 . x . y

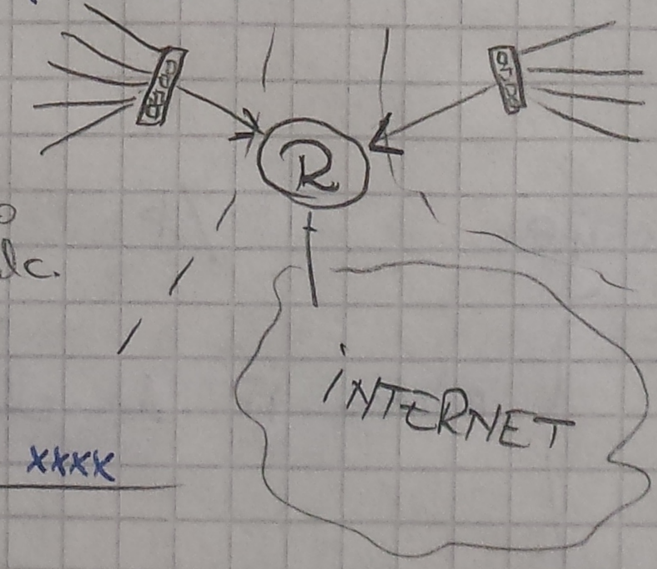
172. 30 . 0.0 / 255. 255. 0.0

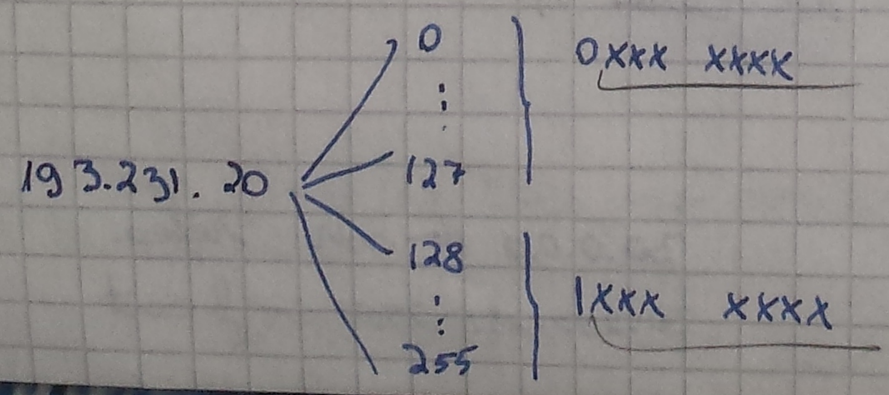
172 . 30 . 255 · 255

GW → 172. 30. 0. 1.

Subnetworking (divizarea în subrețele)

193.231. 20. 0




Sm net mask la sfârșit

=> 7 biți de 0

=> 25 biți de 1

=> ne foloseste subnet mask 193. 231. 20. 128
(1000 0000)

## Curs 7. Clase și subclase de adrese.

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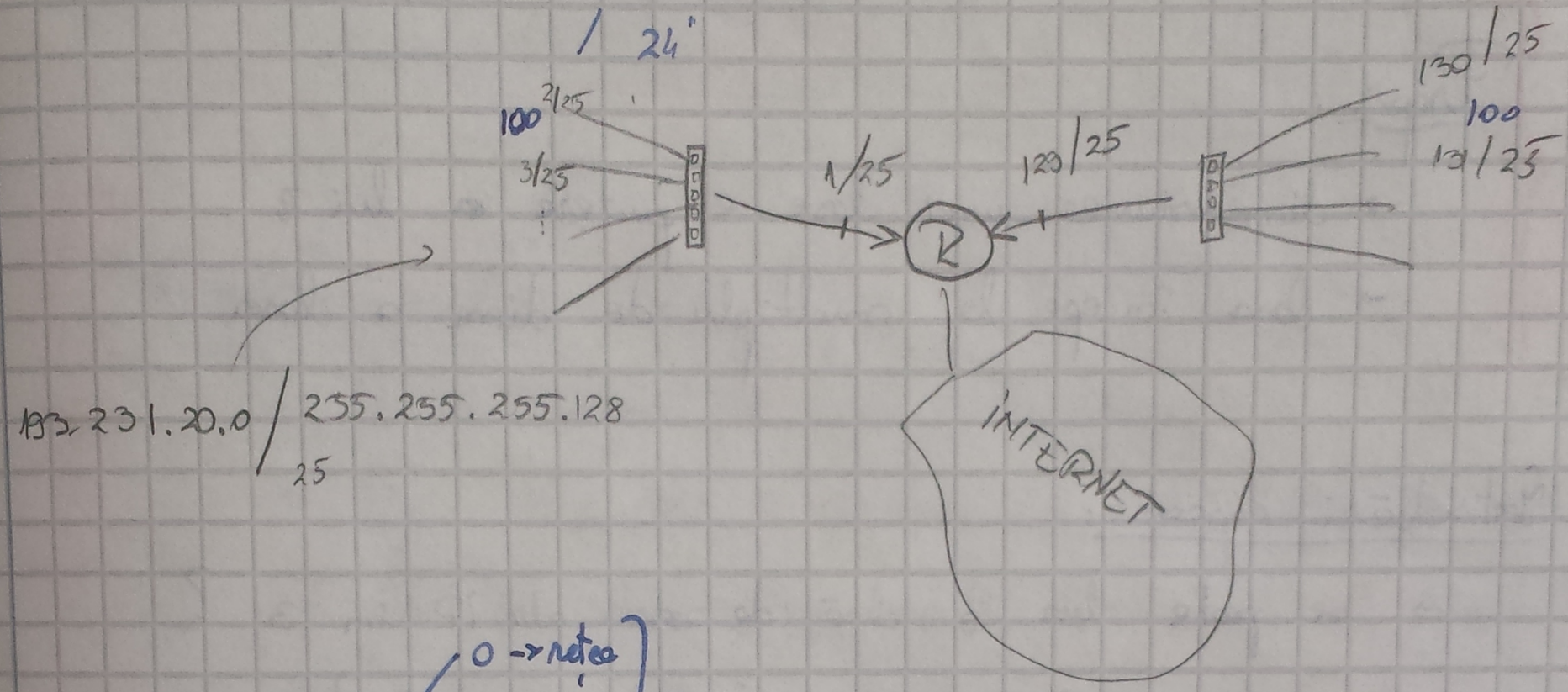
193.231.20.0 / 255.255.255.0
/ 24




193.231.20.0 / 255.255.255.128
/25

0 -> net
127 -> bcast
128 -> net
255 -> bcast
/ 255.255.255.128
/25

193.231.20.0 / 255.255.255.128
/25

/26

0
63
64

0
31
32
63

0
1
2
3

127
128

191
192

255
/25

/27

193.231.20.32
:
193.231.20.95

193.231.20.32 /26

PROSTIE !